Reid Wagner

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Summary

I'm a DevOps software engineer with a physics and mathematics background interested in moving into a full developer role. The combination of my degree with the technical experience of DevOps provides a well-rounded knowledge base that I draw on to understand topics from algorithmic complexity or encryption schemes, to process signals and native threading. But, more than just understanding these structures I want to build them. Topics that interest me include but are not limited to operating systems, compilers, cloud computing, and web development.

Experience

Software Engineer — Thomson Reuters *Jan 2016 – Present (2yr 2mo)*

- As team expert in Git, after leading group in transition from VSS, mediate any severe repository issues and strategize code branching.
- Created and manage custom HTTP request log analyzer and plotter for pinpointing problematic services or request origins.
- Contribute and debug application Java code for DevOps needs.
- Resolve highly technical issues that arise in administration of RHEL servers by researching kernel internals.
- Was key contributor in the migration of entire Production environment and the upgrade of all core technologies shortly thereafter.

Junior Scientist — U. of Minnesota Physics and Astronomy *Sep 2014 - Sep 2015 (1 yr)*

- Optimized spacial, mass, stress, and thermal considerations through design and simulation for cosmological microwave telescope.
- Wrote Visual Basic to operate on large SolidWorks CAD assemblies.
- Worked with custom Python data analysis libraries.
- Designed and built aluminum and steel 12-foot educational demonstration.

Research Intern — Engineo Co., Ltd. *Jan 2013 - Aug 2013 (4 mo)*

- Assisted in sales and installation of solar panel and wind turbine energy systems.
- Carried out experiments including comparison of efficiency of different charge controllers and the cooling of high-power LEDs.

Research Intern — U. of Michigan Materials Science and Engineering *June 2009 - Aug 2009 (3 mo)*

- Worked in graduate lab to develop methods of visualising higher-dimensional data.
- Generated data sets in MATLAB with various mathematical and engineering models.
- Rendered data sets in IDL with techniques incorporating 3D color gradients.

Peer Consultant — Kalamazoo College Math-Physics Center *Oct 2013 - June 2014 (8 mo)*

- Guided students through studying and homework for college math and physics.

Projects, open source and personal

Micropython
- Implemented recalculation of select.poll timeout. (merged)
- Fixed bug where small timeouts rounded to zero. (merged)
- Implemented built-in deque object. (not merged, but still proud)

JSONfs
- Userspace filesystem utilizing FUSE Linux kernel module.
- Persists data as hierarchical JSON structure.
- Can successfully host its own development.

TSEZ80
- Zilog Z80 Emulator Written in C.
- Supports 164 unique opcodes.

x86 Kernel
- Bootloader implemented from scratch in Intel x86 assembly.
- IRQ-based PS/2 keyboard driver.
- VGA terminal driver.

Other
- REST service written in Hy (Lisp dialect of Python).
- cURL, working with maintainers on an open PR.
- stm32f4 MacOS CLI toolchain and flashing tutorial.
- Qubit emulation written in Haskell.
- Smaller contributions to further Github projects including Prost, sshfs, WAScan.

Technical Knowledge

Proficient in: C, Python, Bash/Unix shell, Java
Technologies: Linux and utils, POSIX, JBoss EAP, EJB, Git, Cygwin, Vim, Eclipse, Ant, Maven, Rundeck, Jenkins, Ansible, Wireshark, SSL/TLS, Openstack, Solidworks (CAD), TeX, 3D Printing, AWS, EC2, HTML, CSS, SQL

Education

Kalamazoo College *2010 – 2014*
Bachelors in Physics and Mathematics, with honors in Physics
International Sustainable Development Studies Institute *Aug 2012 - Feb 2013*
Study abroad program in Chiang Mai, Thailand

Awards

John Wesley Hornbeck Prize - Awarded to senior with highest achievement for the year's work in advanced physics major.
Beeler Fellowship - Awarded to fund senior thesis abroad.
Founders Merit Scholarship - Awarded to students who combine strong academic achievement with significant engagement in co-curricular, work, and voluntary activities.
Honors in Physics Degree